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WHAT'S INSIDE

Cost Verification Estimates for FUSRAP

Rick Osborn, HTRW CX

The Energy and Water Development Appropriations Act for Fiscal Year 1998, signed into law on October 13, 1997, gave the responsibility for executing the Formerly Utilized Sites Remedial Action Program (FUSRAP) to the US Army Corps of Engineers. FUSRAP was a Department of Energy (DOE) program created to address radiological contaminated sites used by predessor agencies to DOE; the Manhattan Engineer District, and the Atomic Energy Commission from the 1940s through the 1960s. There are 46 sites in the program. Remediation has been completed at 24 of these sites and remedial action is planned, underway or pending final closeout on the 22 remaining sites.

Preliminary estimates for the 22 remaining sites were developed by the HQUSACE Transition Team and totaled approximately 947 million dollars. Headquarters directed that a cost verification effort be accomplished by each responsible FUSRAP district to prepare more detailed estimates and schedules for these sites.

The CX coordinated a kickoff meeting in Oakridge, Tennessee the week of 26-29 January, 1998 to assemble cost engineers and get them up to speed on the FUSRAP sites. Cost engineers from Baltimore District, Buffalo District, Kansas City District, Louisville District, New England District, Walla Walla District, and the HTRW Center of Expertise (CX) were in attendance. The meeting was presented by Bechtel and SAIC, contracors that managed FUSRAP while under DOE control. The agenda included project overviews, site orientations, review of existing management systems, discussion of estimate types and review of existing cost models.

On 25 February 1998, HQUSACE issued a memorandum providing guidance for the preparation of the verification estimates and schedules to ensure consistency. The memorandum also directed that all the estimates be submitted to the HTRW CX for quality assurance review for reasonableness and completeness. Currently, development of the estimates is underway by the districts and will be submitted to the CX sometime in April and early May for review. The estimates will include costs for all phases of the projects. Since little characterization or design has been accomplished for these sites, district cost engineers have been working closely under a team approach with members from the design and project management offices to accomplish this mission. The verification effort is scheduled to be completed by 29 May 1998.

RACER 98

KATE M. PETERSON, HTRW-CX

The HTRW Center of Expertise has been closely involved in the development of the Remedial Action Cost Engineering Requirements (*RACER*) System. The software is undergoing significant enhancements in Fiscal Year 1998 to be more powerful, flexible, and user friendly. The RACER software will be available for government use at no cost. Furthermore the FUDS program will be sponsoring 8 training classes early in 1999, which cost personnel have the first priority. Additional information on the dates and location for training will be forthcoming. For the 1998 release of the system (to be called *RACER 98*), the significant additional enhancements include:

Conversion to a "True" Windows Environment - This involves moving the system from the current 16-bit application developed under Windows 3.1 to a 32-bit application compatible with Windows 95/NT and higher. The current system does not support features such as "drag and drop" object linking and embedding (OLE), and other functions that allow users to easily interface with other Windows applications. Benefits to the use include faster operation and easy integration with other current Microsoft applications.

New Work Breakdown Structure - *RACER 98* will apply the new Federal Government Hazardous, Toxic and Radioactive (HTRW) Work Breakdown Structure for Capital and O&M costs to the 3rd level.

Comprehensive Cost Database Update - The January 1998 ECHOS Cost Database owned by Delta Technologies Group/ R. S. Means will be included in the new system. This database will provide comprehensive updates for labor, equipment, materials and analysis costs for all assemblies in the current system, and will also provide new assemblies not currently contained in the system. In addition, the new DoD Commercial Unit Price Book Area Cost Factors will be included.

New, Detailed Operations & Maintenance Costing Approach - A new approach will define and estimate costs for 10 categories of O&M costs for each applicable technology and treatment train. The calculations will include length of operation and concentration impacts, with the costs varying appropriately over the O&M duration of the project.

New Treatment Train Wizards - New “wizards” will contain logic for selecting and costing entire treatment trains and study options. They will allow the user to quickly generate complete estimates using minimal site data, with all data entered on a single

screen.

System Preferences Customization - *RACER 98* will contain a "preferences" function that allows the user to set personal template defaults. The user can then run the system using these defaults that reflect the way his or her organization does business and contracting. Example preference categories include: Analytical Protocols and Rates, Professional Labor Categories and Rates, Markup Factors (General Conditions, Overhead and Profit), Project Hierarchy Naming, and Safety Levels/ Productivity Factors.

Interface with Other Project Management Tools - *RACER 98* programming will provide for easier interface with tools such as Microsoft Project and Excel and MCACES.

More Flexible System Hierarchy and Project Administration - A completely new system hierarchy and project administration capability will provide a 5-step hierarchy (Project/ Site/ Phase/ Treatment Train/ Technology) that allows reporting at any level. In addition, the user will be able to change default level names, project categories and site types to better suit his or her needs.

Technical Model Enhancements – The existing technology models have been reviewed by the HTRW CX and other users, and needed technical changes to these models have been identified. The technical changes will be incorporated in *RACER 98*. In addition the technical models will have streamlined required parameters, contaminant/concentration scoping, enhanced consistency between similar models, and enhanced information linkages and flags between related models.

For additional information on the RACER 98 software please contact Kate M. Peterson at the HTRW CX, 402/697-2610.

HTRW Cost Estimating for the Feasibility Study

Stan Hanson, Cost Engineer, HTRW CX

The HTRW CX is working with HQUSACE and HQEPA to update the existing 1987 EPA guidance document entitled "Remedial Action Costing Procedures Manual". A Scope of Work for the first phase was awarded in September 1997 to Woodward-Clyde Federal Services with Project Time & Cost, Inc. as a subcontractor to begin the update. The first phase includes developing a new "Example Feasibility Study Cost Estimate for HTRW Projects" and preparing an outline for "A Guide to Developing and Documenting Remedy Cost Estimates During the Feasibility Study for HTRW". The first phase including the example estimate was recently completed in April 1998. The second phase will include the completion of the guidance document and is projected to be completed in the second half of FY-98.

Feasibility Studies involve the comparison of more than one alternative in order to accomplish a cleanup standard. The comparison includes both technical engineering and cost aspects. This Scope of Work pertains to the cost aspects of Feasibility Studies. The cost of each alternative was analyzed on a life cycle cost basis, including both "Capital" remedial action (including short term O&M) construction costs as well as long term "O&M" costs and shown as a "Present Worth" equivalent cost. The example estimate has been developed for four (4) alternatives including the no action alternative, and three (3) remedial action alternatives. The main purpose of the "Example Feasibility Study Cost Estimate for HTRW

Projects" is to illustrate: (1) a standard format for summary comparisons of alternatives and (2) usage of various software available to Corps cost engineers for backup and for "Present Worth" analysis. The information available to backup the estimate for the typical Feasibility Study is pre-design and thus the use of parametric methods (models) is appropriate and is illustrated as part of the "Example Feasibility Study Cost Estimate for HTRW Projects". The backup to the "Example Feasibility Study Cost Estimate for HTRW Projects" utilizes Micro Computer Aided Cost Engineering System (MCACES) for one (1) alternative, Remedial Action Cost Engineering and Requirements (RACER) for one (1) alternative, and spreadsheet software Microsoft Excel for one (1) alternative. This mix of software for the backup illustrates each for format and example purposes only. Life Cycle Cost (LCC) software was used to do the "Present Worth" comparisons of the alternatives. HAZRISK was used to develop the contingencies for the Remedial Action. The backup for the Remedial Action and Operation and Maintenance costs are structured using the Standard Interagency HTRW RA and O&M Work Breakdown Structures to at least the third (subsystem) level.

The "Example Feasibility Study Cost Estimate for HTRW Projects" Final Report (April 1998) will be posted electronically to the Cost Engineering Bulletin Board System (CEBBS) under the HTRW folder and will be posted to the HTRW CX internet web site (http://www.mrd.usace.army.mil/mrded-h/mrded-h.html) for downloading. To obtain a hardcopy contact Stan Hanson at the HTRW CX by e-mail (stanley.l.hanson@usace.army.mil) or telephone (402-697-2609).

We encourage everybody to provide comments and suggestions so that future issues can address your needs. Ms. Jackyee Campbell (CEMP-EE) is the writer/coordinator for this newsletter and can be reached at (202) 761-4747 for any comments, inputs, etc.

DEADLINE FOR THE AUGUST EDITION IS 24 JULY 1998.